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09/767,885	01/24/2001	Kimio Inoue	202182US3	2548
22850 7590 09/28/2007 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER SORKIN, DAVID L	
			ART UNIT 1723	PAPER NUMBER
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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/767,885
Filing Date: January 24, 2001
Appellant(s): INOUE, KIMIO

MAILED
SEP 28 2007
GROUP 1700

Robert T. Pous
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 24 July 2007 appealing from the Office action mailed 02 February 2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue et al. (US 5,947,593). Regarding claim 10, Inoue ('593) discloses a twin-screw extruder comprising a barrel (3) having two intercommunicating chambers (4) and an opening at a tip end thereof (see col. 4, lines 52-55); and a screw set (1) mounted in each of said chambers so as to not completely mesh with one another (see Fig. 3 and applicant's admission in the remarks filed 8/13/04, on the page numbered "5" lines 7-8); each screw set comprising a rotor segment (a first segment 1b) comprising at least one kneading rotor having a plurality of kneading blades which provide a plurality of tip clearances (those of 7a,7b,7c) different from each other in the circumferential direction, said kneading rotor having a constant sectional shape (such as the cross-sectional shape of Fig. 4) in the axial direction, as viewed in a section transverse to the axial direction, and a screw segment (a second segment 1b) comprising at least one screw blade, said screw segment, except for crest portions, having the same sectional shape as said rotor segment comprising at least one kneading rotor, as viewed in a section transverse to the axial direction, except for crest portions (see col. 6, line 50-col. 7 line 6; Figs. 6-8). The relied upon embodiment of Figs. 1-10 is not expressly referred to by the reference with the terms "extruder" or "extrusion opening" recited in claim 10; however, the disclosure in col. 4, lines 40-55 that material is continuously advanced from one end of the barrel to the other would have suggested an extruder and extrusion

opening to one of ordinary skill in the art. The express use of the term “extruding apparatus” to characterized the second embodiment would have further suggested an extruder and extrusion opening to one of ordinary skill in the art. Column 14, lines 30-33 would have especially provided motivation to one of ordinary skill in the art to have combined the teachings of the so-called “continuous kneading apparatus” embodiment and “kneading/extruding apparatus” embodiment, where it is stated “The present embodiment has been described by means of a kneading/extruding apparatus, whereas a continuous kneading apparatus may be employed”. Regarding claim 11, the rotor segment provides tip clearances different from each other in the axial direction (see col. 3, lines 27-32; Fig. 1). Regarding claim 12, as seen in, for example, Fig. 3 which shows C_3 symmetry (rotation of 120 degree yields equivalent position), said same sectional shape is symmetrical. Regarding claim 13, “recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus” *Ex parte Masham* 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987).

(10) Response to Argument

Appellant repeatedly makes the accusation “The Examiner has therefore relied upon the unremarkable fact that rotor segment 1b has the same shape as *itself*” (emphasis in original; page 3 of brief). However, Inoue et al. (US 5,947,593) discloses plural segments 1b, and the examiner has relied upon the fact that the plural segments 1b have the required same shape as one another. For example, as seen in Fig. 6 of

Inoue et al. (US 5,947,593), there are two screws, each screw having four 1b segments (separated by vertical dashed lines), each 1b segment having a set of blades 7a, 7b and 7c.

As appellant points out on page 3 of the brief, the grounds for rejection do not involve segment "1a" of the reference, and instead involve a first segment "1b" satisfying the "screw segment" limitation of claim 10 and a second segment "1b" satisfying the "rotor segment" limitation of claim 10.

Segments 1b of Inoue et al. (US 5,947,593) are referred to as "rotor segments" and also "kneading segments" (see for example col. 7, line 22; col. 8, line 41), but are not explicitly referred to as "screw segments". However, it is stated that the blades of the rotor segments have "spiral angles" (col. 3, lines 25-27), therefore, segments 1b are within the scope of the term "screw segment". In summary, because segments "1b" are segments which rotate and which have spiral blades, segments "1b" are "rotor segments" and are "screw segments".

The declarations of Dr. Inoue, who is an inventor of the instant application and of the prior art reference, have been considered. In a declaration filed 17 November 2003, Dr. Inoue discusses the terms "screw segment" and "kneading segment". Dr. Inoue testifies that there is a specific structural difference between these two types of segments, stating:

In a screw segment, the helix angle is 8 to 25 degrees (72 [sic] to 65 degrees in twist angle). In a kneading segment, the twist angle is 10 to 40 degrees (50 to 80 degrees in helix angle).

This declaration of Dr. Inoue contradicts both the prior art reference itself (of which Dr. Inoue is also an inventor and declared upon filing that he reviewed and understood) and

the instant specification. US 5,947,593, the relied upon prior art reference, states that a kneading segment may have a twist angle substantially outside the testified range.

Specifically it states in col. 10, lines 22-48:

Arrangement and quantity of kneading blades 7 and spiral angle thereof may be arbitrarily selected...

The kneading blade 7 may be formed straight at a spiral angle of 0°, or may be formed with a large spiral angle. The spiral angle should preferably be within a range of from 10 to 60°. While a small angle reduces the flow of the material in kneading in the axial direction and the resultant increase in the amount of material passing through the tip clearance permits promotion of dispersing action, a large spiral angle allows promotion of mixing within the chamber 4 as a result of an increase in the flow in the axial direction. A spiral angle with a range of from 10 to 60° degrees enable to derive both advantages simultaneously.

Furthermore, the testimony of Dr. Inoue also contradicts the instant specification, including the claims, which Dr. Inoue previously declared he reviewed and understood and was the inventor of. For example original instant claim 5 recited that the kneading blades of the rotor segment may be parallel to the axis of rotation. See also page 14, lines 9-19 of the instant specification.

That Dr. Inoue changed his testimony concerning the meaning of “kneading segment” and “screw segment”, should not be the basis for granting Dr. Inoue another patent. “The specification and the evidence fail to support the gloss appellants seek to put on that term” *In re Sneed* 218 USPQ 385 (Fed. Cir. 1983).

The relied upon embodiment of Figs. 1-10 of Inoue et al. (US 5,947,593) is not expressly referred to by the reference with the terms “extruder” or “extrusion opening” recited in claim 10; however, the disclosure in col. 4, lines 40-55 that material is continuously advanced from one end of the barrel to the other would have suggested an extruder and extrusion opening to one of ordinary skill in the art, as the term “extrude” means “to force, press, or push out” (Merriam-Webster’s Collegiate Dictionary, 10th

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edition). The use of the term "extruding apparatus" (col. 10 line 51) to characterize the second embodiment would have further suggested an extruder and extrusion opening to one of ordinary skill in the art. Column 14, lines 30-33 would have especially provided motivation to one of ordinary skill in the art to have combined the teachings of the so-called "continuous kneading apparatus" embodiment and "kneading/extruding apparatus" embodiment, where it is stated "The present embodiment has been described by means of a kneading/extruding apparatus, whereas a continuous kneading apparatus may be employed".

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



David Sorkin
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Conferees:



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